

REMARKS

Claims 1-33 are pending; claims 11-25 are allowed; claims 1, 3, 26, 27 and 33 are rejected; and claims 2, 4-10 and 28-32 are objected to in this application. Applicants have amended Claims 1, 2, 4, 5, 7, 26-28 and 31 and respectfully request reconsideration and withdrawal of all rejections.

Responsive to the objection to the Drawings, Applicants have attached hereto an amended replacement drawing sheet for Figure 2. In the amended replacement drawing sheet, the label "38" has been deleted. Applicants submit that the Drawings are now in allowable form.

Responsive to the objection to claims 31-32, Applicants have amended claim 31 and have removed any typographical error in the listing of the claims above. Applicants submit that claims 31-32 are now in allowable form.

Responsive to the rejection of claims 1, 3, 26-27 and 33 under 35 U.S.C. §102(e) as being anticipated by Mendis et al. ('933), Applicants have amended claims 1, and 26-27. Applicants submit that claims 1, 3, 26-27 and 33 are now in condition for allowance.

Mendis discloses a Design-for-Test structure to verify properties of the functionality of an associated active pixel sensors pixel's signal conditioning readout circuitry Sig C/R (Figure 6). With proper timing of switch control signals for S1 and S2, a known voltage can be established on the floating diffusion node FD just before the pixel readout operation. This known voltage undergoes the full readout operation and the corresponding output can be compared with the expected output.

In contrast, Applicants' claim 1, as amended, recites a read-out circuit having a plurality of buffers enabled to transfer the injected output signal from the pixels to the controller. (emphasis added).

Mendis is completely silent as to a read-out circuit having buffers for transferring an injected output signal from pixels to a controller. Thus, Mendis does not disclose or suggest a read-out circuit having a plurality of buffers enabled to transfer the injected output signal from the pixels to the controller, as recited by amended claim 1.

For all the above reasons, Mendis does not teach, disclose or suggest the subject matter of amended claim 1. Thus, claim 1, and claim 3 depending therefrom, are in condition for allowance, which is hereby respectfully requested.

Applicants' claim 26, as amended, recites:

outputting a first electrical signal to each pixel to inject a known charge into the pixel;

outputting a second electrical signal to each pixel to read an output signal representing the injected charge;

comparing the output signal to an expected output signal to test the operation of each pixel;

outputting a third electrical signal to each pixel; and

dumping the injected charge in response to the third signal and removal of the first and second electrical signals, thereby leaving a background charge.

(emphasis added). Thus, claim 26, as amended, recites subject matter that is substantially similar to the subject matter of apparatus claim 5, which the Examiner indicated to be allowable.

USSN 10/784,490 filed 02/23/2004 (DP-303087)  
Amendment dated: 21-December-2005  
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Accordingly, claim 26, and claims 27 and 33 depending therefrom, are in condition for allowance, which is hereby respectfully requested.

Applicants thank the Examiner for acknowledging the allowable subject matter of claims 2, 4-10 and 28-32. As suggested by the Examiner, claim 2 has been amended to include all the subject matter of base claim 1; claim 4 has been amended to include all the subject matter of base and intervening claims 1 and 3; claim 5 has been amended to include all the subject matter of base claim 1; claim 7 has been amended to include all the subject matter of base claim 1; claim 28 has been amended to include all the subject matter of base and intervening claims 26 and 27; and claim 31 has been amended to include all the subject matter of base claim 26. Accordingly, claim 2, claim 4, claim 5 and claim 6 depending therefrom, claim 7 and claims 8-10 depending therefrom, claim 28 and claims 29-30 depending therefrom, and claim 31 and claim 32 depending therefrom are now in allowable form.

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CONCLUSION

Applicants believe, in view of the amendments and remarks herein, that all grounds of rejection of the claims have been addressed and overcome, and that all still pending claims are in condition for allowance.

If it would further prosecution of the application, the Examiner is urged to contact the undersigned at the telephone number provided.

The commissioner is hereby authorized to charge any fees associated with this communication and/or credit any overpayments to Deposit Account No. 50-0831.

Respectfully submitted,

  
Keith J. Swedo  
Reg. No. 43,176  
Baker & Daniels LLP  
300 North Meridian Street  
Suite 2700  
Indianapolis, IN 46204  
Telephone: (317) 237-0300  
Fax: (317) 237-1000  
intear@bakerd.com

USSN 10/784,490 filed 02/23/2004 (DP-303087)  
Amendment dated: 21-December-2005  
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**Amendments to the Drawings:**

The attached replacement sheet of drawings includes changes to FIG. 2. This replacement sheet, which includes FIG. 2, replaces the original sheet including FIG. 2. In this replacement sheet, the label "38" is removed.

Attachment: Replacement Sheet